

Work Order ID 150891***150891***

Page 1

Monday, September 12, 2016 7:49:50 AM

Item ID: 647.1306 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible
Start Date: 9/12/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 9/16/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: **DAS 21 9-89** Date: **SEP 12 2016** Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100	DOCUMENT CONTROL	0.00							
100							DAS 21 9-89	SEP 12 2016	
DC	Memo	0.00					DAS 27 9-89		
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP 647.1306								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.00					DAS 27 9-89		
Quality Control									

SEP 26 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 150891***150891***

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Monday, September 12, 2016 7:49:50 AM

Item ID: 647.1306 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible
Start Date: 9/12/2016 Start Qty: 1.00 *1* Cust Item ID:
Required Date: 9/16/2016 Req'd Qty: 1.00 *1* Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Packaging	0.00							
130									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP 647.1306 Location: _____								
	EXPIRY DATE OF: <i>N/A</i> RTV Loctite 598: <i>02-01-17</i> MAGNOBOND 6398 PART 1: <i>02-01-17</i> MAGNOBOND 6398 PART 2: <i>02-01-17</i> SEALANT PR-1425: <i>01-01-2017</i>								
	***INDICATE ON BOX EXPIRY DATE OF RTV, MAGNOBOND PART1, MAGNOBOND PART2 AND SEALANT PR-1425 ***								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control	*** Enter exp. date in lot maintenance for RTV loctite 598, MAGNOBOND PART1, MAGNOBOND PART2 AND SEALANT PR-1425 ***								

SEP 26 2016

SEP 26 2016

W 16.09.26

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
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OTHER : ☐					

Picklist Print

Monday, September 12, 2016 7:49:53 AM

Page 1

Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A NEW ISSUE 13.07.16 JLM VERIFIED BY:DD IPP
REV:C 14.05.05 AS PER DWG REV C1 DD VERF:JLM IPP REV:D
14.07.31 AS PER ECN C2 DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
647.1602 *647 1602* Doubler Assembly		Manufactured	No				Each	27.0000		1			DAS 8 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				CCK107				27					
				92479				4					
				M130388				23					
647.2201 *647 2201* Cross Assembly		Manufactured	No				Each	9.0000		1			DAS 8 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				cck079				9					
				132104				4					
				94797				5					
647.3201 *647 3201* Grounding Cable Assembly		Manufactured	No				Each	7.0000		1			DAS 8 9-89
				<u>Location</u>				<u>Loc Qty</u>					
				cck111				7					
				123417				7					

SEP 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

Picklist Print

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Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

647.1911 Manufactured No

Each 11.0000

647 1911

Bracket RH

**

1

PC

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK110

11

125082

3

92227

8

647.1912 Manufactured No

Each 10.0000

647 1912

Bracket LH

**

1

PC

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK110

10

125082

2

92228

8

647.1817 Manufactured No

Each 16.0000

647 1817

Support RH

**

1

PC

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK092

16

125082

16

647.1816 Manufactured No

Each 17.0000

647 1816

Support LH

**

1

PC

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK092

17

125082

16

92551

1

SEP 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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Picklist Print

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Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

647.1914

Manufactured No

Each

8.0000

647 1914

Bracket

**

1

DAS
6
9-89

Location

Loc Qty

Loc Code

CCK110

8

109733

8

647.1915

Manufactured No

Each

29.0000

647 1915

Support Angle

**

1

DAS
8
9-89

Location

Loc Qty

Loc Code

CCK093

29

114127

6

92230

9

93416

3

M130388

11

647.1815

Manufactured No

Each

34.0000

647 1815

Gusset RH

**

1

DAS
6
9-89

Location

Loc Qty

Loc Code

CCK110

10

106681

3

92076

4

92492

3

cck122A

24

M130388

24

SEP 12 2016

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Shop Packet Print

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER : _____					

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Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

647.1814

Manufactured No

Each

36.0000

647 1814

Gusset LH

**

1

PC

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK110

6

106843

3

93333

3

cck122A

30

92075

6

M130388

24

647.1913

Manufactured No

Each

21.0000

647 1913

Tee

**

1

PC

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK093

21

114126

6

92229

10

94139

5

647.1813

Manufactured No

Each

46.0000

647 1813

Angle

**

2

PC

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK108

46

125082

22

92074

18

92556

2

94189

4

SEP 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coor. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
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Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition		Completed By																	
				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
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OTHER : _____																					

Picklist Print

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Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

647.1818
647 1818
Nose Door Spacer

Manufactured No

Each 33.0000

**

1

PC

DAS
6
9-89

Location

Loc Qty

Loc Code

CCK110

9

92079

6

93302

3

cck122A

24

M130388

24

647.1810
647 1810
Nose Door Doubler

Manufactured No

Each 22.0000

**

1

PC

DAS
6
9-89

Location

Loc Qty

Loc Code

CCK108

22

92070

6

93293

3

M130388

13

647.1910
647 1910
Clip

Manufactured No

Each 55.0000

**

4

PC

DAS
6
9-89

Location

Loc Qty

Loc Code

CCK110

55

125082

20

92226

31

92506

4

SEP 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Picklist Print

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Page 6

Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

647.1812

Manufactured No

Each

324.0000

647 1812

Shim

**

13

pc

DAS
6
9-89

Location

Loc Qty

Loc Code

CCK107

274

92073

77

M130388

197

CCK108

50

92490

1

93192

49

Each

133.0000

13

4

pc

DAS
6
9-89

647.2510

Manufactured No

647 2510

Sleeve

**

Location

Loc Qty

Loc Code

cck111

28

92233

28

cck122A

105

125082

63

M130388

42

Each

67.0000

4

R

DAS
6
9-89

647.2511

Manufactured No

647 2511

Nut

**

Location

Loc Qty

Loc Code

cck111

67

100468

10

110638

26

92235

18

93354

13

DAS
27
9-89

4

SEP 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐				

Picklist Print

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Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

647.1811

Manufactured No

Each

52.0000

647 1811

Spacer

**

2

pc

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK108

52

92009

1

92072

12

93341

6

M130388

33

AN4CH6A

Purchased

No

Each

43.0000

AN4CH6A

Bolt

**

1

pc

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST345

43

123525

20

123900

3

m126176

20

AN3-4A

Purchased

No

Each

152.0000

AN3-4A

Bolt

**

2

pc

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST350

152

m134955

152

SEP 12 2016

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Picklist Print

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Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

MS24694-C52

Purchased

No

Each

85.0000

MS24694-C52

SCREW

**

10

PC

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

FP001

29

m127059

17

m133855

12

ST285

50

m135466

50

ST287

6

124308

6

10

MS27039C1-06

Purchased

No

Each

185.0000

MS27039C1-06

Screw (601.2459)

**

18

PC

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST277

185

123525

185

MS27039-1-07

Purchased

No

Each

305.0000

MS27039-1-07

Screw

**

3

PC

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

270

125654

270

Return2016

1

m127813

1

ST281

34

m135015

34

18

3

SEP 12 2016

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Shop Packet Print

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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Picklist Print

Monday, September 12, 2016 7:49:53 AM

Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

Each

312.0000

MS27039-1-10

SCREW

**

6

PC

DAS
6
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

12

m129541

12

ST280

300

m135603

300

Each

99.0000

**

4

PC

DAS
6
9-89

MS27039-1-20

Purchased

No

MS27039-1-20

Screw

DAS
27
9-89

Location

Loc Qty

Loc Code

ST280

99

124326

99

Each

111.0000

**

1

PC

DAS
6
9-89

MS27039-08-07

Purchased

No

MS27039-08-07

SCREW

DAS
27
9-89

Location

Loc Qty

Loc Code

ST278

111

m130388

1

m131317

10

m132035

100

Each

2,550.000

**

62

PC

DAS
6
9-89

NAS1149F0332P

Purchased

No

NAS1149F0332P

Washer

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

282

m133709

282

ST262

2268

m135058

268

m135544

2000

62

SEP 12 2016

Monday, September 12, 2016 7:49:53 AM

Shop Packet Print

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																
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Picklist Print

Monday, September 12, 2016 7:49:53 AM

Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

NAS1149FN832P Purchased No

Each 3,153.000

NAS1149FN832P

Washer

**

PC

DAS 6 9-89

Location

Loc Qty

Loc Code

GA

1553

M133316

16

M133769

89

M135058

1448

ST263

1600

M135603

1600

MS21042-3 MS21042L3 Purchased No

Each 0.0000

MS21042-3

Nut

**

27 M135401 PC

DAS 6 9-89

MS21042-08 MS21042L08 Purchased No

Each 33.0000

MS21042-08

USE MS21042L08

**

1 X A 135466 PC

DAS 6 9-89

Location

Loc Qty

Loc Code

ST304

25

122815

25

ST306

8

m130388

8

MS21047-3 Purchased No

Each 177.0000

MS21047-3

Nut Plate

**

12 PC

DAS 6 9-89

Location

Loc Qty

Loc Code

ST301

177

m135297

77

m135603

100

12

SEP 12 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐		No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐		Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐		Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐		Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐		Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐		Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐		Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐		Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐		Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐		Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐		Manufacturing Process	☐	OTHER :						
Misidentified	☐		Past Due	☐							

Picklist Print

Monday, September 12, 2016 7:49:54 AM

Page 11

Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

CCR264SS3-04

Purchased

No

Each

352.0000

12

**

PC

DAS
6
9-89

CCR264SS3-04

Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

352

123785

352

Each

121.0000

4

**

PC

DAS
6
9-89

CCR274SS-3-03

Purchased

No

CCR274SS-3-03

Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

ST321

121

123785

121

Each

206.0000

4

**

PC

DAS
6
9-89

CCR264SS-3-03

Purchased

No

CCR264SS-3-03

Cherry Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

LG001

93

m128606

25

m134023

68

ST321

113

m135127

113

Each

441.0000

4

**

m 135 05 G PC

DAS
6
9-89

CR3213-4-4

Purchased

No

CR3213-4-4

Rivet, Cherry

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

400

M135408

100

M135536

300

ST319

41

M130388

35

M134962

6

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER : ☐ _____					

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Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

CR3213-6-6

Purchased

No

Each

300.0000

CR3213-6-6

Rivet (601.2995)

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK004

200

m126254

100

m127831

100

ST318

100

123785

100

CR3212-4-3

Purchased

No

Each

100.0000

CR3212-4-3

Cherry Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

100

m135408

100

CR3213-4-5

Purchased

No

Each

225.0000

CR3213-4-5

Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

100

M129913

100

ST319

125

M129913

125

CR3213-4-2

Purchased

No

Each

112.0000

CR3213-4-2

Cherry Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

100

m134058

100

ST320

12

123301

12

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
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				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																			
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OTHER :																					

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Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

CR3213-4-6

Purchased No

Each 166.0000

CR3213-4-6

Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

ST319

166

M131800

166

Each 250.0000

CR3213-4-7

Purchased No

CR3213-4-7

Rivet

Location

Loc Qty

Loc Code

CCK003

100

m126320

100

ST319

150

123785

150

Each 80.0000

CR3213-4-8

Purchased No

CR3213-4-8

Rivet

DAS
27
9-89

Location

Loc Qty

Loc Code

ST319

80

123785

80

Each 126.0000

NAS1834C3-300

Purchased No

NAS1834C3-300

Insert

Location

Loc Qty

Loc Code

ST207

126

M124826

26

M128686

100

ST549

DAS
27
9-89

11

**

PC

DAS
6
9-89

11

16

**

PC

DAS
6
9-89

16

12

**

PC

DAS
6
9-89

12

2

**

PC

DAS
6
9-89

2

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DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
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Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																	
OTHER : _____																									

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Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

MS21266-2N

Purchased No

Each

55.0000

MS21266-2N

Grommet

DAS
27
9-89

Location

Loc Qty

Loc Code

ST294

55

123900

40

M130388

15

601.3011

Manufactured No

f

76.1000

601.3011

P-Seal

DAS
38
9-89

Location

Loc Qty

Loc Code

CCK095

50

91709

50

CCK099

26.1

M130388

26.1

601.3006

Purchased No

Each

20.0000

601.3006

Camloc Receptacle - 26R 16-1

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK098

20

M130388

20

601.3005

Purchased No

Each

0.0000

601.3005

Camloc Retainer - 2600-LW

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK098

20

M130388

20

601.3004

Purchased No

Each

20.0000

601.3004

Camloc Stud - 26S8-11

DAS
27
9-89

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

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Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

600.0990

Purchased

No

Each

30.0000

600 0990

Magnabond 6398 Part A Size 112 ml

**

1

PC

DAS
6
9-89

Location

Loc Qty

Loc Code

CA2

23

M135213

11

M135600

12

PKG

7

M134167

1

M134249

6

Each

161.0000

4

PC

DAS
6
9-89

MS27039-1-15

Purchased

No

MS27039-1-15

Screw

**

Location

Loc Qty

Loc Code

GA

21

m127916

21

ST280

140

m132640

40

m134852

100

Each

29.0000

1

PC

DAS
6
9-89

600.0991

Purchased

No

600 0991

Magnabond 6398 Part B Size 112 ml

**

Location

Loc Qty

Loc Code

CA2

23

m135213

11

m135600

12

PKG

6

m134167

1

m134249

5

1

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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																																																																						
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Picklist Print

Monday, September 12, 2016 7:49:54 AM

Page 16

Work Order ID: 150891

150891

Parent Item: 647.1306

647 1306

Parent Item Name: EC145 Cable Cutter System Fixed Provisions U Channel Compatible

Start Date: 9/12/2016

Required Date: 9/16/2016

Start Qty: 1.00

Required Qty: 1.00

600.1012 Purchased No

Each 23.0000

600 1012

Sealant PR1425B2 (#654 sem)

**

1

PC

DAS
6
9-89

Location

Loc Qty

Loc Code

cck017

23

m135407

5

m135530

8

m135600

10

601.2045 Purchased No

Each 9.0000

601 2045

RTV (LOCTITE 598)McMaster p/n: 6641A41

**

1

135628

R

DAS
6
9-89

Location

Loc Qty

Loc Code

CCK096

1

m135138

1

GA

8

m134260

8

MS27039-1-17 Purchased No

Each 183.0000

MS27039-1-17

Screw (601.1954)

**

2

PC

DAS
6
9-89

Location

Loc Qty

Loc Code

GA

183

m120142

34

m127831

149

647.2112 Manufactured No

Each 0.0000

647 2112

Upper U Channel

**

1

149970

R

DAS
6
9-89

SEP 12 2016

Monday, September 12, 2016 7:49:54 AM

Shop Packet Print

Page 16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																																																											
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval																																																																																									
Description Work Order Deviation			Disposition																																																																																										
			Completed By																																																																																										
			Lead hand / Supervisor Approval Verification																																																																																										
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NOTES: UNLESS OTHERWISE SPECIFIED

- 1 AFTER INSTALLATION, APPLY F/N 73 A/R TO FILL GAPS AND FILLET EDGES
2. APPLY F/N 74 TO FAYING SURFACES
- 3 AT CUSTOMERS OPTION, INSTALL F/N 77 BY MATCH DRILLING ONTO F/N 1
- 4 INSTALL FOR 647.1301, 647.1302.
- 5 INSTALL FOR 647.1304, 647.1305.
- 6 APPLICABLE WHEN EUROCOPTER P/N 145-250014.11 IS INSTALLED WITH EUROCOPTER CABLE CUTTER FIXED PROVISIONS.
- 7 APPLICABLE WHEN REPLACING EUROCOPTER P/N 145-250074.11
- 8 INSTALL WITH:
647.1304
647.1305
647.1307
647.1308

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 150891MLJ
16-09-12

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
REV.	LAST PROTOTYPE REVISION: P10		N/C
N/C	INITIAL RELEASE	08/05/01	P. BRAVO
A	INCORPORATED ECH 02943, 02020, 02048	01/22/11	P. BRAVO
B	INCORPORATED ECH 04979	07/05/13	P. BRAVO
C	INCORPORATED ECH 04059	08/13/13	P. BRAVO
D	INCORPORATED ECH'S 04655, 04921 & 04976	04/17/15	P. BRAVO

1		1	1		1	1		1	14	647.1817	SUPPORT, RH		
1		1	1		1	1		1	13	647.1912	BRACKET, LH		
1		1	1		1	1		1	12	647.1911	BRACKET, RH		
	8	8		8	8			8	8	647.0112	STRUT BRACKET		
								1	1	647.2110	LOWER RAIL		
								1	1	647.2111	UPPER RAIL		
	1	1		1	1			1	1	647.1610	WIPER DEFLECTOR, FWD		
	1	1		1	1			1	1	647.1601	WIPER DEFLECTOR ASSY, AFT		
								2	2	647.1701	SKID DEFLECTOR ASSY		
1		1	1		1	1		1	5	647.3201	GROUNDING CABLE ASSY		
1		1	1		1	1		1	4	647.2201	CROSS ASSY		
1		1	1		1	1		1	3	647.1602	DOUBLER ASSY		
	1	1		1	1			1	1	647.1402	CUTTER ASSY (LOWER)		
								1	1	647.1401	CUTTER ASSY (UPPER)		
X										647.1309	EC145 T2 FIXED PROVISIONS KIT		
	X									647.1308	EC145 T2 REMOVABLE PROVISIONS KIT		
		X								647.1307	EC145T2 CABLE CUTTERS KIT		
			X							647.1306	FIXED PROVISIONS KIT U CHANNEL		
				X						647.1305	REMOVABLE PROVISIONS KIT U CHANNEL		
					X					647.1304	EC145 CABLE CUTTERS KIT U CHANNEL COMPATIBLE		
						X				647.1303	FIXED PROVISIONS KIT		
							X			647.1302	REMOVABLE PROVISIONS KIT		
								X		647.1301	EC145 CABLE CUTTERS KIT		
.1309	.1308	.1307	.1306	.1305	.1304	.1303	.1302	.1301	FIND #	PART #	DESCRIPTION	MATL	SPEC.

BOM Table (Restructured)

QTY		PARTS LIST	
NEXT ASSY (S)	ORIGINAL DATE: 10/26/01 DRAWN BY: R. ROSANO CHECKED BY: D. BARBER DRAWING APPROVAL: P. BRAVO CONTRACT NO.:	3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760) 724-5300 DART AEROSPACE AERIAL INDUSTRIES, INC. DIV. DART AEROSPACE	
DIMENSIONS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: 3 PLACE DECIMALS: .003 2 PLACE DECIMALS: .010 ANGLES: .5°		EC145 CABLE CUTTERS KIT SIZE: B CAGE CODE: 07M26 DWG. NO.: 647.1300 SCALE: NONE	
		SHEET 1 OF 10	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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	4	4		4	4		4	4	51	601.3209	LOCKNUT	MS21042L4	
1	4	5	1	4	5	1	8	9	50	601.2973	LOCKNUT	MS21042-08	
27	19	46	27	19	46	27	18	45	49	601.2943	LOCKNUT	MS21042-3	
	3	3		3	3		3	3	48	601.2375	WASHER		
2	8	10	2	8	10	2	16	18	47	601.2764	WASHER	NAS1149FN832P	
62	42	104	62	42	104	62	40	102	46	601.1607	WASHER	NAS1149F0332P	
1		1	1		1	1		1	45	601.2525	SCREW	MS27039-0807	
4		4	4		4	4		4	44	601.1952	SCREW	MS27039-1-20	
							4	4	43	601.3010	SCREW	MS27039-0810	
	4	4		4	4		4	4	42	601.3224	SCREW	ANS25-10R12	
6		6	6		6	6		6	41	601.1365	SCREW	MS27039-1-10	
3		3	3		3	3		3	40	601.2198	SCREW	MS27039-1-07	
	3	3		3	3		3	3	39	601.2999	SCREW		
18		18	18		18	18		18	38	601.2459	SCREW	MS27039C1-06	
	4	4		4	4		4	4	37	601.1622	SCREW	MS27039-1-14	
10		10	10		10	10		10	36	601.2051	SCREW	MS24694CS2	
2		2	2		2	2		2	35	601.2823	BOLT	AN3-4A	
1		1	1		1	1		1	34	601.1324	BOLT	AN4CH6A	
	2	2		2	2		2	2	33	601.1874	BOLT	AN3C10A	
	12	12		12	12		16	16	32	601.2826	BOLT	AN3-11A	
	8	8		8	8		8	8	31	601.2638	WASHER	NAS1149F0432P	
	4	4		4	4		4	4	30	601.3002	BOLT	NAS6604-66	
2		2	2		2	2		2	29	647.1811	SPACER		
4		4	4		4	4		4	28	647.2511	NUT		
4		4	4		4	4		4	27	647.2510	SLEEVE		
13		13	13		13	13		13	26	647.1812	SHIM		
4		4	4		4	4		4	25	647.1910	CLIP		
1		1	1		1	1		1	24	647.1810	NOSE DOOR DOUBLER		
1		1	1		1	1		1	23	647.1818	NOSE DOOR SPACER		
2		2	2		2	2		2	22	647.1813	ANGLE		
1		1	1		1	1		1	21	647.1913	TEE		
1		1	1		1	1		1	20	647.1814	GUSSET, LH		
1		1	1		1	1		1	19	647.1815	GUSSET, RH		
1		1	1		1	1		1	18	647.1915	SUPPORT ANGLE		
	2	2		2	2		2	2	17	647.2011	LOWER STRUT		
1		1	1		1	1		1	16	647.1914	BRACKET		
1		1	1		1	1		1	15	647.1816	SUPPORT, LH		
.1309	.1308	.1307	.1306	.1305	.1304	.1303	.1302	.1301	FIND #	PART #	DESCRIPTION	MATL	SPEC.

BOM Table(Restructured)

ORIGINAL DATE 07/06/09	CHECKED D. BARNER	 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300
DRAWN BY R. ROSANO	APPROVED P. BRAVO/09/09/09	
CONTRACT NO.		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.010 ANGLES ± .5°		
EC145 CABLE CUTTERS KIT CAGE CODE 07M26 DWG. NO. 647.1300		REV. D SCALE NONE SHEET 2 OF 10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																		
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																		
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																		
Large Fab ☐	Composite ☐	Supplier ☐																			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval																	
Description Work Order Deviation		Disposition		Completed By																	
				Lead hand / Supervisor Approval Verification																	
				QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER :																					

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THE WRITTEN PERMISSION OF DART AEROSPACE IS PROHIBITED.

	2	2							89	647.1703	T2 SKID DEFLECTOR ASSY		
	8	8							88	601.3812	LOCK TAB	LN9023A8-1.4544.9	
			2	2					87	647.1702	SKID DEFLECTOR ASSY	△	
	1	1		1	1				86	647.2113	LOWER RAIL (U CHANNEL KIT)		
	8	8		8	8				85	601.3655	WASHER	LN9025-0820K	
	8	8		8	8				84	601.3654	SCREW	LN9037-08018	
1		1	1		1				83	647.2112	UPPER U CHANNEL		
	8	8		8	8				82	601.3653	WASHER	93475A270	
	4	4		4	4				81	601.3652	LOCKNUT	93625A300	
	4	4		4	4				80	601.3651	SCREW	91292A080	
	1	1		1	1				79	647.1403	CUTTER ASSY (UPPER U CHANNEL)		
	5	5		5	5				78	601.3650	BOLT	AN3-15A	
REF	REF	REF	REF	REF	REF	REF	REF	REF	77	647.5701	GPS MOUNT KIT	△	
2		2	2		2	2		2	76	601.1954	SCREW	MS27039-1-17	
	2	2		2	2		2	2	75	647.2010	UPPER STRUT		
1	1	1	1	1	1	1	1	1	74	601.2045	RTV	LOCTITE 598	
1	1	1	1	1	1	1	1	1	73	600.1012	SEALANT	PR-1425 CLASS B	
1	1	1	1	1	1	1	1	1	72	600.0991	MAGNOBOND 6398 PART B		
1	1	1	1	1	1	1	1	1	71	600.0990	MAGNOBOND 6398 PART A		
4		4	4		4	4		4	70	601.3012	SCREW	MS27039-1-15	
2		2	2		2	2		2	69	601.3004	CAMLOC STUD		
2		2	2		2	2		2	68	601.3005	CAMLOC RETAINER		
2		2	2		2	2		2	67	601.3006	CAMLOC RECEPTACLE		
3 FT.		3 FT.	3 FT.		3 FT.	3 FT.		3 FT.	66	601.3011	P-SEAL		
1.1 FT.		1.1 FT.	1.1 FT.		1.1 FT.	1.1 FT.		1.1 FT.	65	601.3007	GROMMET	MS21266-2N	
2		2	2		2	2		2	64	601.3008	INSERT	NAS1834C3-300	
12		12	12		12	12		12	63	601.2364	RIVET	CR3213-4-8	
16		16	16		16	16		16	62	601.2468	RIVET	CR3213-4-7	
11		11	11		11	11		11	61	601.2991	RIVET	CR3213-4-6	
2		2	2		2	2		2	60	601.1039	RIVET	CR3213-4-2	
8		8	8		8	8		8	59	601.1183	RIVET	CR3213-4-5	
22		22	22		22	22		22	58	601.0790	RIVET	CR3213-4-3	
8		8	8		8	8		8	57	601.2995	RIVET	CR3213-6-6	
4		4	4		4	4		4	56	601.1915	RIVET	CR3213-4-4	
12		12	12		12	12		12	55	601.2207	NUTPLATE RIVET	CCR2645S-3-03	
4		4	4		4	4		4	54	601.1983	NUTPLATE RIVET	CCR2745S-3-03	
12		12	12		12	12		12	53	601.2980	NUTPLATE RIVET	CCR2645S-3-04	
12		12	12		12	12		12	52	600.0795	NUTPLATE	MS21047-3	
.1309	.1308	.1307	.1306	.1305	.1304	.1303	.1302	.1301	FIND #	PART #	DESCRIPTION	MATL	SPEC.

BOM Table (Restructured)

ORIGINAL DATE
07/04/00
DRAWN BY
R. BOSANO
CHECKED
D. BARKER
DRAWING APPROVAL
P. BRAVO
DATE
07/04/00
CONTRACT NO.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS ±.01
3 PLACE DECIMALS ±.005
ANGLES ±.5°

 DART AEROSPACE		3030 ENTERPRISE CT., SUITE A	
		VISTA, CA 92081 (760) 724-5300	
APICAL INDUSTRIES, INC. 500 DART AEROSPACE		EC145 CABLE CUTTERS KIT	
SIZE B	CAGE CODE 07M26	DWG. NO. 647.1300	REV. D
SCALE NONE		SHEET 3 OF 10	

DQA: _____ Date: _____



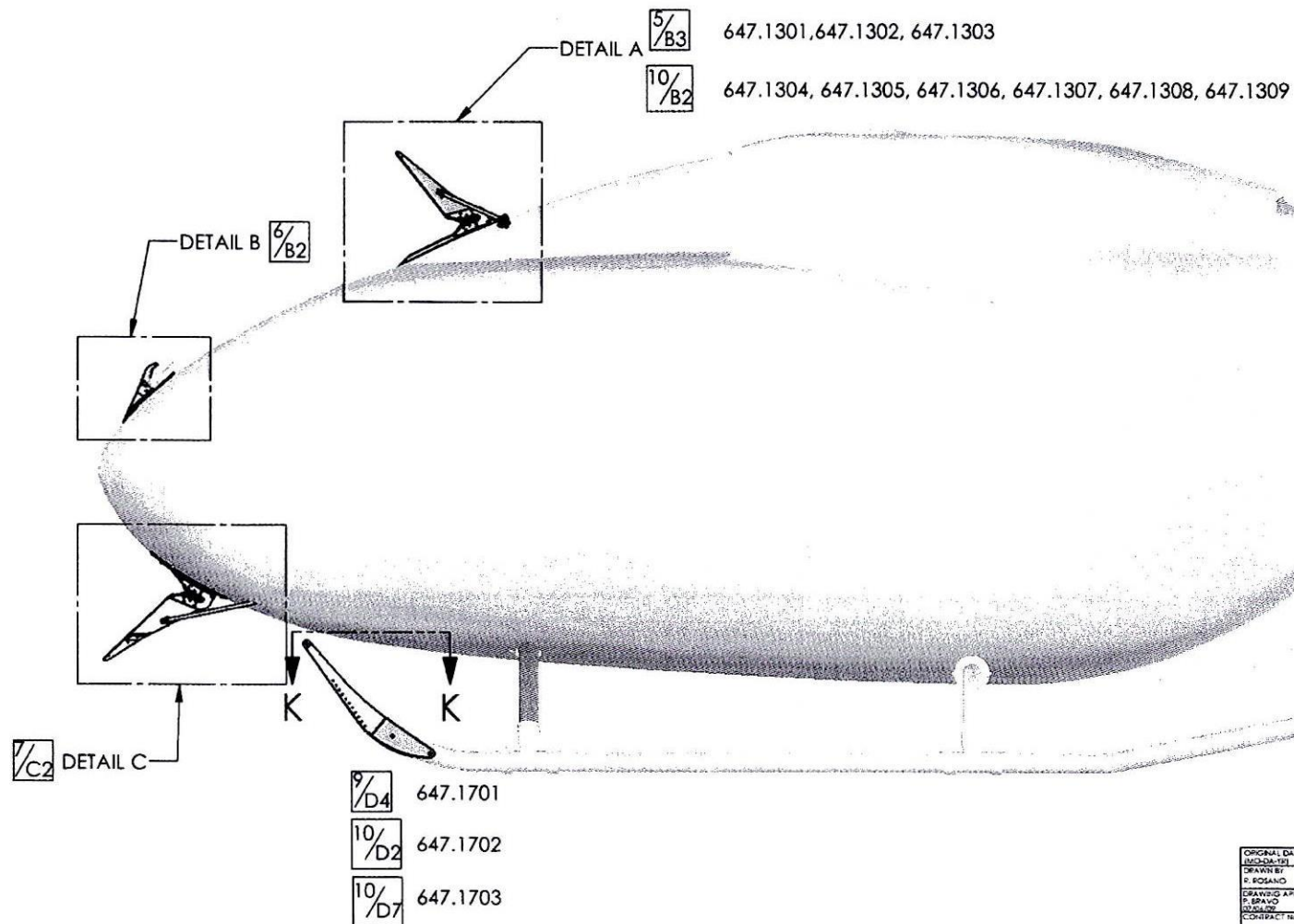
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation		Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER :			

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ORIGINAL DATE 10/01/01		3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760) 724-5300	
DRAWN BY P. BOSANO		D. BARBER	
DRAWING APPROVAL P. BOSANO		D. BARBER	
CONTRACT NO.			
DIMENSIONS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS .01 3 PLACE DECIMALS .001 ANGLES .5°		EC145 CABLE CUTTERS KIT	
SIZE B	CAGE CODE 07M26	DWG. NO. 647.1300	REV D
SCALE NONE		SHEET 4 OF 10	

DQA: _____ Date: _____

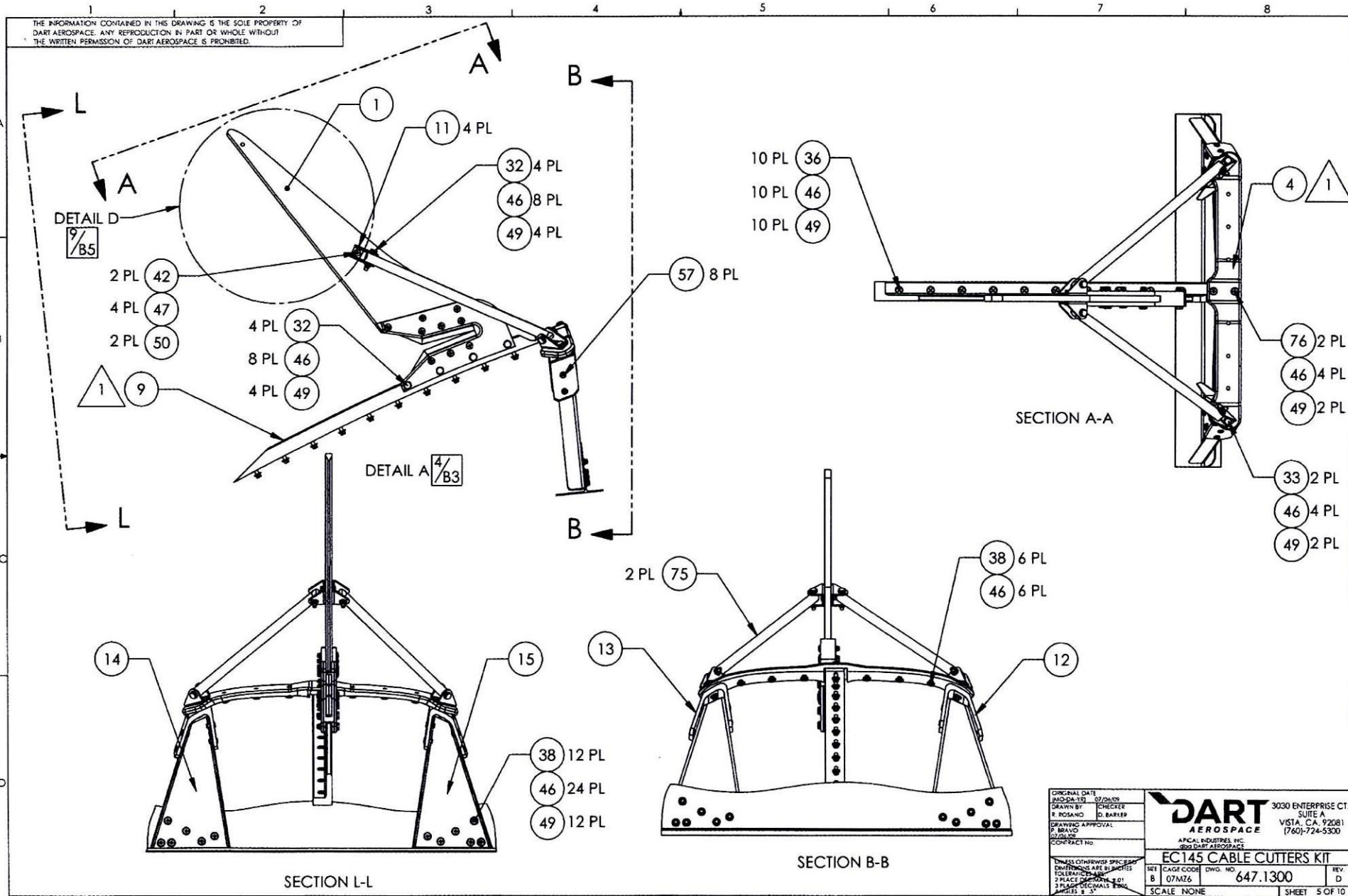


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					



DQA: _____ Date: _____



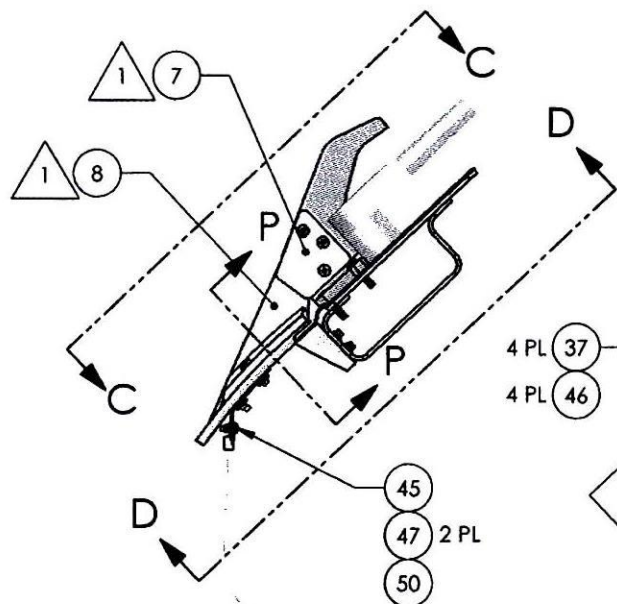
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

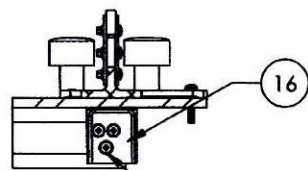
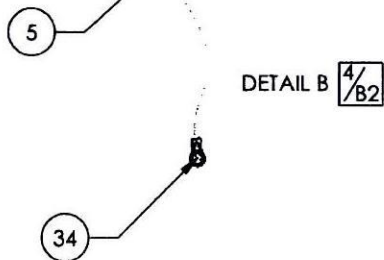
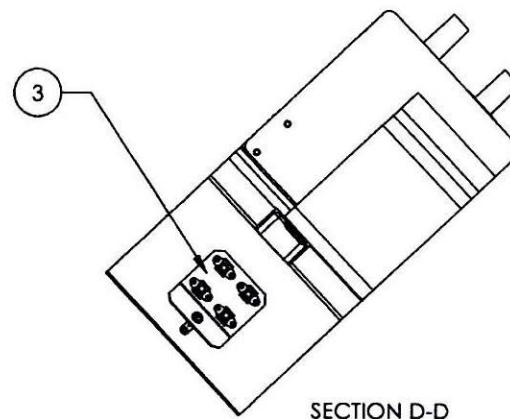
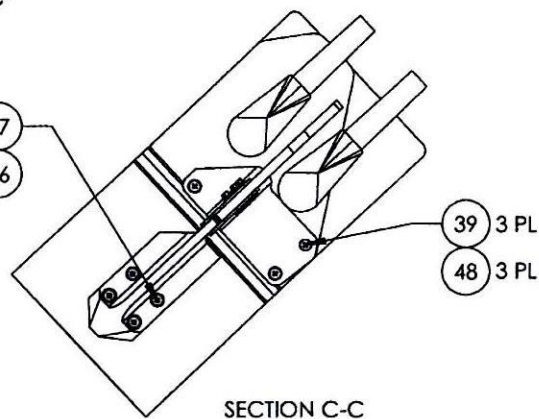
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																					
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4 PL 37
4 PL 46



40 3 PL
46 6 PL
49 3 PL

ORIGINAL DATE 07/06/07		3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300	
DRAWN BY R. BOSANO		D. BARKER	
DRAWING APPROVAL P. BRAYO		07/06/07	
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		DART AEROSPACE EC145 CABLE CUTTERS KIT SIZE B CAGE CODE 07M26 DWG. NO. 647.1300 REV. D SCALE NONE SHEET 6 OF 10	

DQA: _____ Date: _____

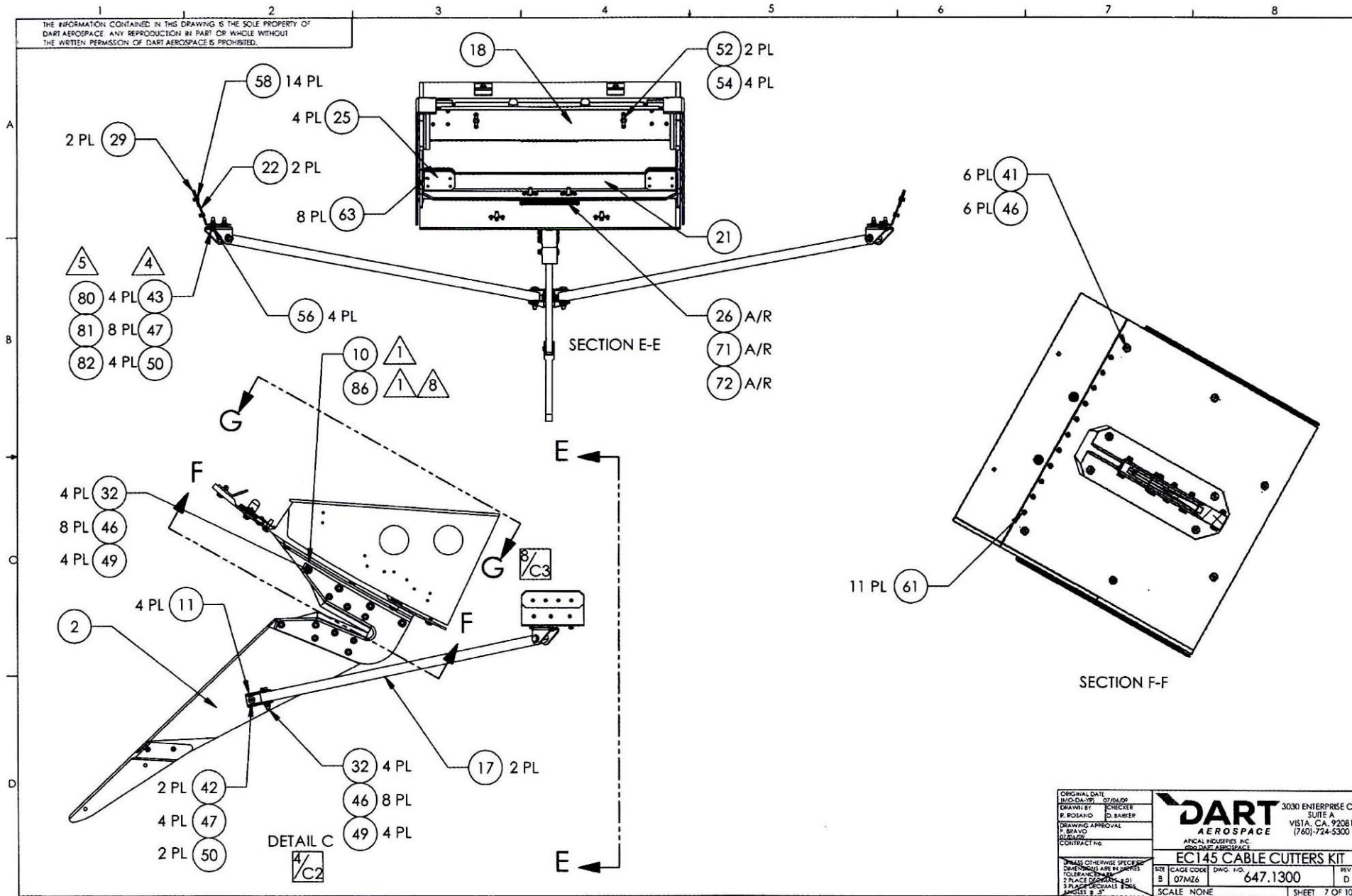


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
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Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			



ORIGINAL DATE 11/01/91		D/01/91		3030 ENTERPRISE CT. SUITE A VISTA, CA. 92081 (760) 724-5300	
DRAWN BY R. ROSANO		CHECKED BY D. BARBER		DART AEROSPACE	
DRAWING APPROVAL P. BRAY		D/01/91		AFICAL INDUSTRIES, INC. dno DART AEROSPACE	
CONTRACT NO.		CAGE CODE 8 07M26		DWG. NO. 647.1300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.001 ANGLES ±.5°		SCALE NONE		REV D	
				SHEET 7 OF 10	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
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Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

DQA: _____ Date: _____



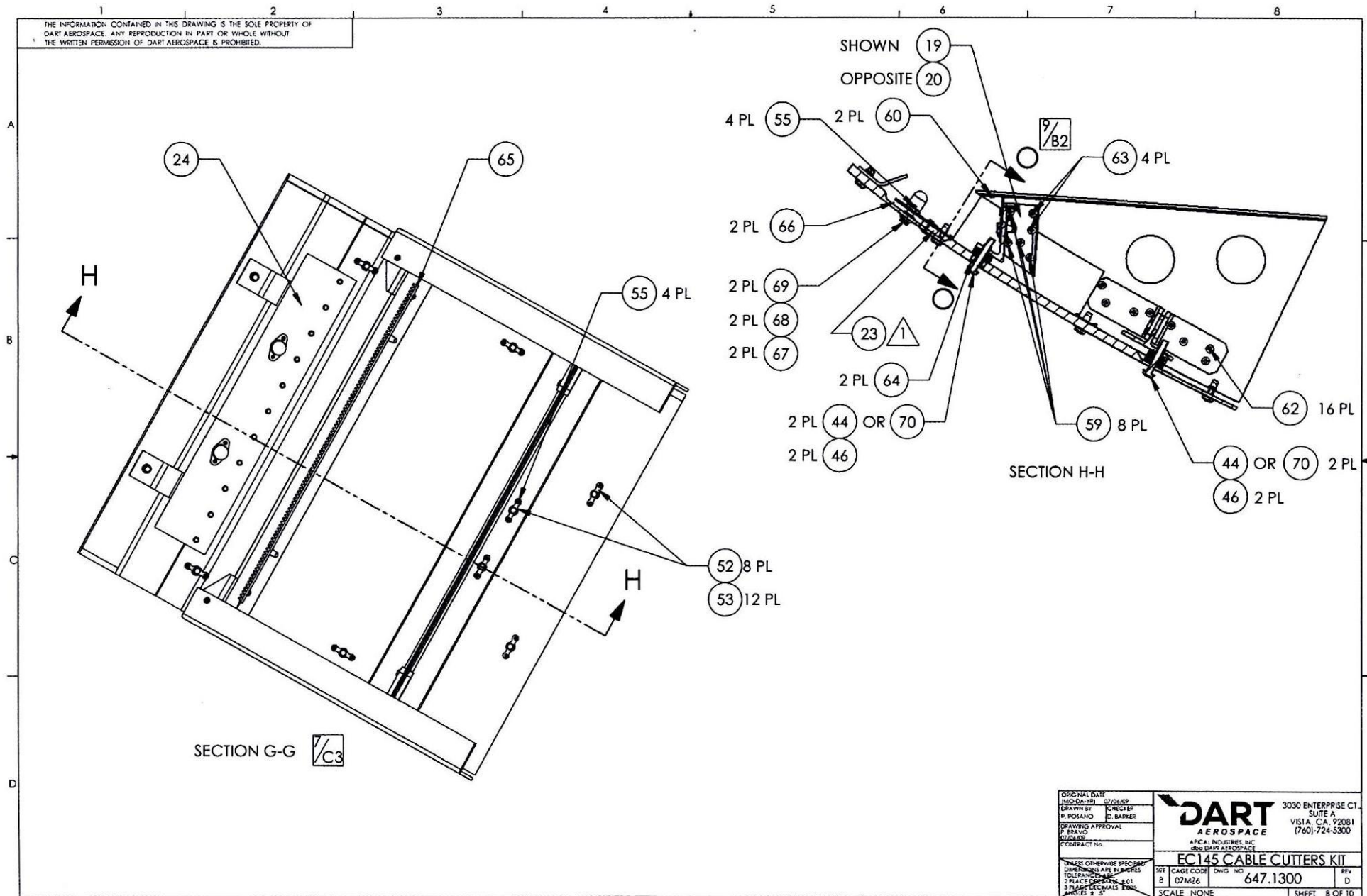
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
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Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
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LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

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ORIGINAL DATE 11/03/04		3030 ENTERPRISE CT. SUITE A VISTA, CA, 92081 (760)-724-5300	
DRAWN BY P. ROSANO		CHECKED BY D. BARBER	
DRAWING APPROVAL P. ROSANO		APCA INDUSTRIES, INC. c/o DART AEROSPACE	
CONTRACT NO.		EC145 CABLE CUTTERS KIT	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		REV B	REV D
CAGE CODE 07M26		DWG NO. 647.1300	
SCALE NONE		SHEET 8 OF 10	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																		
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																		
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																		
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																		
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																		
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																		
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																		
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																		
OTHER :																																																																					

8 PL (58) 2 PL (35) 2 PL (52)
2 PL (46) 4 PL (55)

A/R 26
A/R 71
A/R 72

SECTION O-O 

77 REF 3 1

REF 1

DETAIL D 8/A6

SHOWN ISOMETRICALLY
TYPICAL GPS MOUNT KIT INSTALLATION

SECTION K-K
TYP. 2 PL
FOR KIT 647.1301

INBOARD

ORIGINAL DATE JMD-A-181 07/05/09 DRAWN BY T. TORRES R. ROSALES D. SAYER DRAWING APPROVAL P. BACAO 07/05/09 CONTACT No.	 3030 ENTERPRISE C1 SUITE A VISTA, CA 92081 (760)-724-5300 AEROSPACE AFFILIATED COMPANIES AND GEOGRAPHIC AREAS												
EC145 CABLE CUTTERS KIT													
DIMENSIONS OTHERWISE SPECIFIED UNLESS OTHERWISE INDICATED TOLERANCES ARE IN INCHES 2 PLACE DECIMALS UNLESS OTHERWISE SPECIFIED 3 PLACE DECIMALS FOR DIMENSIONS	<table border="1"> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>CHKD</th> <th>APP'D</th> </tr> <tr> <td>1</td> <td>07/05/09</td> <td>EC145 CABLE CUTTERS KIT</td> <td>T. TORRES</td> <td>R. ROSALES</td> <td>P. BACAO</td> </tr> </table>	REV	DATE	DESCRIPTION	BY	CHKD	APP'D	1	07/05/09	EC145 CABLE CUTTERS KIT	T. TORRES	R. ROSALES	P. BACAO
REV	DATE	DESCRIPTION	BY	CHKD	APP'D								
1	07/05/09	EC145 CABLE CUTTERS KIT	T. TORRES	R. ROSALES	P. BACAO								
SCALE NONE	SHEET 9 OF 10												

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

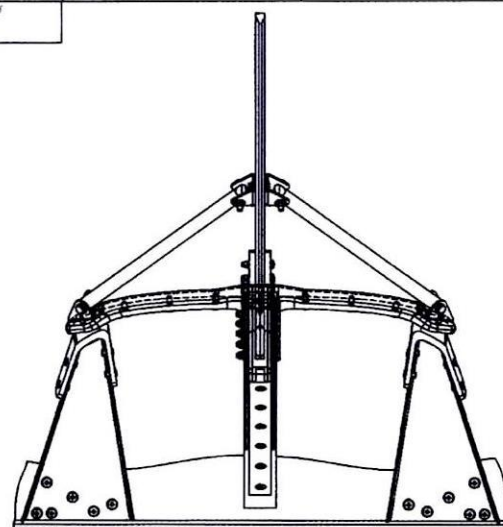
QA Closed: _____ Date: _____

Work Order update only ☐

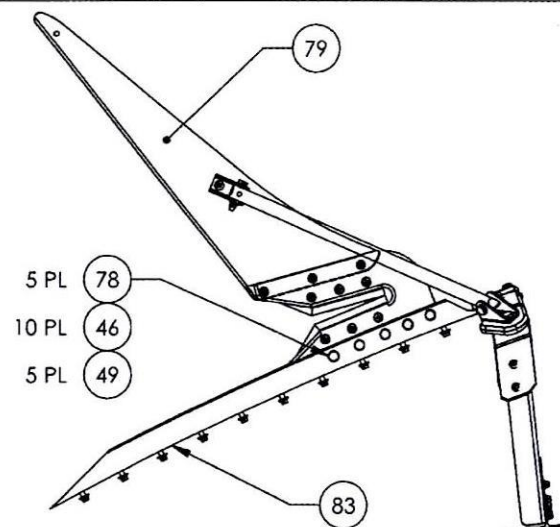
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment	☐		No Re-verification	☐		Pressure/Forced	☐
Design	☐		Operator	☐		Bending	☐
Doc/Data	☐		Offset/Setup	☐		Centre Not Concentric	☐
Equip/Tooling	☐		Supplier	☐		Cracks	☐
Handling/Pre	☐		Training	☐		Crimp/Kink/Ripple/Wave	☐
Material	☐		Use for Testing	☐		Cuffs	☐
Internal Transport	☐		Poor Information	☐		Crushing	☐
Tribal Knowledge	☐		Rushing	☐		Heat Treat	☐
LOA	☐		Product Improvement	☐		Wave/Twist in Tube	☐
Substation	☐		Process Improvement	☐		Marks/Chatter	☐
Past Expiry Date	☐		Manufacturing Process	☐		Temperature/Cure	☐
Misidentified	☐		Past Due	☐		Set-up	☐
						BOM/Route	☐
						Broken/Damage/Defect	☐
						Inspection Incomplete/Unqualified	☐
						Contamination	☐
						Countersink	☐
						Cut Too Short	☐
						Instructions Incomplete/Unclear	☐
						Drill Holes	☐
						Power Loss/Surge	☐
						Folio/Program	☐
						Grain	☐
						Weld	☐
						Wrong Stock Pulled	☐
						Out of Sequence	☐
						Off-set	☐
						Mislabeled	☐
						Fit/Function	☐
						Misaligned/off center	☐
						Positioned Wrong	☐
						Outside Dimensions	☐
						Over/Under tolerance	☐
						Part Incorrect	☐
						Part Lost/Missing	☐
						Part Moved	☐
						Drawing	☐
						Finish	☐
						Misread	☐
						Turning Sequence	☐
OTHER : _____							

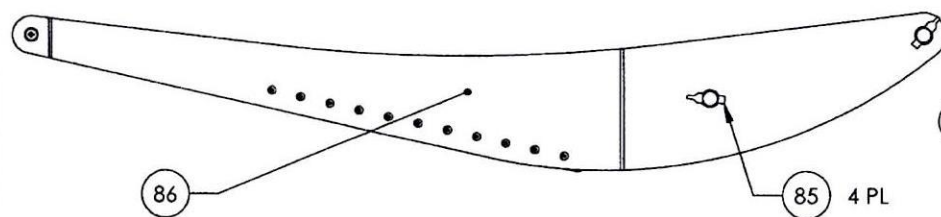
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF
DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT
THE WRITTEN PERMISSION OF DART AEROSPACE IS PROHIBITED.



DETAIL A
WITH U CHANNEL $\frac{4}{B3}$

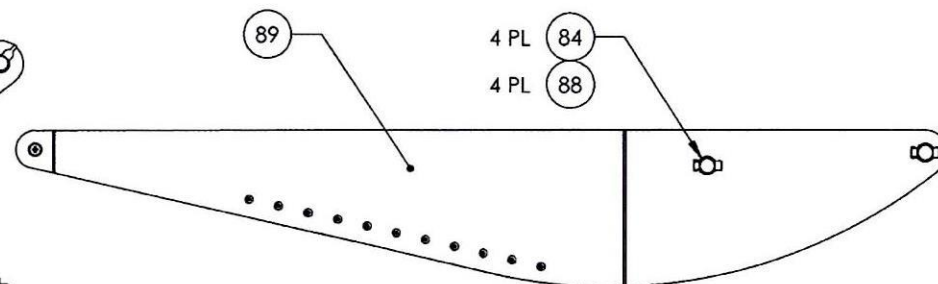


5 PL (78)
10 PL (46)
5 PL (49)



86

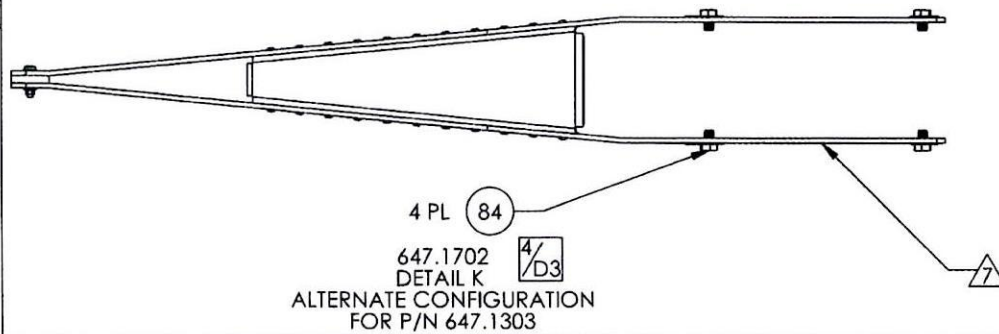
85 4 PL



89

4 PL (84)
4 PL (88)

647.1703
DETAIL K
T2 CONFIGURATION



4 PL (84)

647.1702
DETAIL K
ALTERNATE CONFIGURATION
FOR P/N 647.1303

ORIGINAL DATE	3030 ENTERPRISE CT.,
MODIFIED	SUITE A,
DRAWN BY	VISTA, CA 92081
R. ROSANO	(760)-724-5300
CHECKED	
D. BARBER	
DRAWING APPROVAL	
P. BRAY	
DATE	
CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED	
ALL DIMENSIONS ARE IN INCHES	
TOLERANCES ARE:	
3 PLACE DECIMALS ±.01	
2 PLACE DECIMALS ±.005	
ANGLES ±.5°	
SIZE	EC145 CABLE CUTTERS KIT
CAGE CODE	647.1300
DWG. NO.	REV
B 07ME6	D
SCALE NONE	SHEET 10 OF 10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE IS PROHIBITED.

	2	2								89	647.1703	T2 SKID DEFLECTOR ASSY		
	8	8								88	601.3812	LOCK TAB	LN9023A8-1.4544.9	
				2	2					87	647.1702	SKID DEFLECTOR ASSY	△	
	1	1		1	1					86	647.2113	LOWER RAIL (U CHANNEL KIT)		
	8	8		8	8					85	601.3655	WASHER	LN9025-0820K	
	8	8		8	8					84	601.3654	SCREW	LN9037-08018	
1	1	1		1	1					83	647.2112	UPPER U CHANNEL		
	8	8		8	8					82	601.3653	WASHER	93475A270	
	4	4		4	4					81	601.3652	LOCKNUT	93625A300	
	4	4		4	4					80	601.3651	SCREW	91292A080	
	1	1		1	1					79	647.1403	CUTTER ASSY (UPPER U CHANNEL)		
	5	5		5	5					78	601.3650	BOLT	AN3-15A	
REF	REF	REF	REF	REF	REF	REF	REF	REF	REF	77	647.5701	GPS MOUNT KIT	△	
2	2	2		2	2			2	2	76	601.1954	SCREW	MS27039-1-17	
	2	2		2	2			2	2	75	647.2010	UPPER STRUT		
1	1	1		1	1			1	1	74	601.2045	RTV	LOCTITE 598	
1	1	1		1	1			1	1	73	600.1012	SEALANT	PR-1425 CLASS B	
1	1	1		1	1			1	1	72	600.0991	MAGNOBOND 6398 PART B		
1	1	1		1	1			1	1	71	600.0990	MAGNOBOND 6398 PART A		
4	4	4		4	4			4	4	70	601.3012	SCREW	MS27039-1-15	
2	2	2		2	2			2	2	69	601.3004	CAMLOC STUD		
2	2	2		2	2			2	2	68	601.3005	CAMLOC RETAINER		
2	2	2		2	2			2	2	67	601.3006	CAMLOC RECEPTACLE		
3 FT.	3 FT.	3 FT.		3 FT.	3 FT.			3 FT.	3 FT.	66	601.3011	P-SEAL		
1.1 FT.	1.1 FT.	1.1 FT.		1.1 FT.	1.1 FT.			1.1 FT.	1.1 FT.	65	601.3007	GROMMET	MS21266-2N	
2	2	2		2	2			2	2	64	601.3008	INSERT	NAS1834C3-300	
12	12	12		12	12			12	12	63	601.2364	RIVET	CR3213-4-8	
16	16	16		16	16			16	16	62	601.2468	RIVET	CR3213-4-7	
11	11	11		11	11			11	11	61	601.2991	RIVET	CR3213-4-6	
2	2	2		2	2			2	2	60	601.1039	RIVET	CR3213-4-2	
8	8	8		8	8			8	8	59	601.1183	RIVET	CR3213-4-5	
22	22	22		22	22			22	22	58	601.0790	RIVET	CR3213-4-3	
8	8	8		8	8			8	8	57	601.2995	RIVET	CR3213-6-6	
4	4	4		4	4			4	4	56	601.1915	RIVET	CR3213-4-4	
12	12	12		12	12			12	12	55	601.2207	NUTPLATE RIVET	CCR264SS-3-03	
4	4	4		4	4			4	4	54	601.1983	NUTPLATE RIVET	CCR274SS-3-03	
12	12	12		12	12			12	12	53	601.2980	NUTPLATE RIVET	CCR264SS-3-04	
12	12	12		12	12			12	12	52	600.0795	NUTPLATE	MS21047-3	
.1309	.1308	.1307	.1306	.1305	.1304	.1303	.1302	.1301	FIND #	PART #	DESCRIPTION	MATL	SPEC.	

BOM Table (Restructured)

ORIGINAL DATE
07/06/09
DRAWN BY
R. ROSANO
CHECKED BY
D. BARBER
DRAWING APPROVAL
P. BRAVO
07/06/09
CONTRACT NO.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS ±.01
3 PLACE DECIMALS ±.005
ANGLES ±.5°

DART AEROSPACE 3030 ENTERPRISE CT., SUITE A VISTA, CA 92081 (760)-724-5300		REV.
		D
APICAL INDUSTRIES, INC. PROVIDE AEROSPACE		
EC145 CABLE CUTTERS KIT		
SIZE B	CAGE CODE 07MA26	DWG. NO. 647.1300
SCALE NONE		SHEET 3 OF 10

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE IS PROHIBITED.

NOTES: UNLESS OTHERWISE SPECIFIED

1 AFTER INSTALLATION, APPLY F/N 73 A/R TO FILL GAPS AND FILLET EDGES

2. APPLY F/N 74 TO FAYING SURFACES

3 AT CUSTOMERS OPTION, INSTALL F/N 77 BY MATCH DRILLING ONTO F/N 1

4 INSTALL FOR 647.1301, 647.1302.

5 INSTALL FOR 647.1304, 647.1305.

6 APPLICABLE WHEN EUROCOPTER P/N 145-250014.11 IS INSTALLED WITH EUROCOPTER CABLE CUTTER FIXED PROVISIONS.

7 APPLICABLE WHEN REPLACING EUROCOPTER P/N 145-250074.11

8 INSTALL WITH:
647.1304
647.1305
647.1307
647.1308

REFERENCE ONLY

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	LAST PROTOTYPE REVISION: P10		N/C
N/C	INITIAL RELEASE	06/05/09	P. BRAVO
A	INCORPORATED ECH 02943, 03020, 03048	01/25/11	P. BRAVO
B	INCORPORATED ECH 03917	07/05/13	P. BRAVO
C	INCORPORATED ECH 04059	08/13/13	P. BRAVO
D	INCORPORATED ECH 04485, 04521 & 04976	04/17/15	P. BRAVO

1		1	1		1	1		1	14	647.1817	SUPPORT, RH		
1		1	1		1	1		1	13	647.1912	BRACKET, LH		
1		1	1		1	1		1	12	647.1911	BRACKET, RH		
	8	8		8	8			8	8	11	647.0112	STRUT BRACKET	
								1	1	10	647.2110	LOWER RAIL	
								1	1	9	647.2111	UPPER RAIL	
	1	1		1	1			1	1	8	647.1610	WIPER DEFLECTOR, FWD	
	1	1		1	1			1	1	7	647.1601	WIPER DEFLECTOR ASSY, AFT	
								2	2	6	647.1701	SKID DEFLECTOR ASSY	
1		1	1		1	1		1	5	647.3201	GROUNDING CABLE ASSY		
1		1	1		1	1		1	4	647.2201	CROSS ASSY		
1		1	1		1	1		1	3	647.1602	DOUBLER ASSY		
	1	1		1	1			1	1	2	647.1402	CUTTER ASSY (LOWER)	
								1	1	1	647.1401	CUTTER ASSY (UPPER)	
X											647.1309	EC145 T2 FIXED PROVISIONS KIT	
	X										647.1308	EC145 T2 REMOVABLE PROVISIONS KIT	
		X									647.1307	EC145 T2 CABLE CUTTERS KIT	
			X								647.1306	FIXED PROVISIONS KIT U CHANNEL	
				X							647.1305	REMOVABLE PROVISIONS KIT U CHANNEL	
					X						647.1304	EC145 CABLE CUTTERS KIT U CHANNEL COMPATIBLE	
						X					647.1303	FIXED PROVISIONS KIT	
							X				647.1302	REMOVABLE PROVISIONS KIT	
								X			647.1301	EC145 CABLE CUTTERS KIT	
.1309	.1308	.1307	.1306	.1305	.1304	.1303	.1302	.1301	FIND #	PART #	DESCRIPTION	MATL	SPEC.

BOM Table (Restructured)

QTY	ORIGINAL DATE (MM-DD-YY) 07/05/09	DART AEROSPACE 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760) 724-5300 APICAL INDUSTRIES, INC. 0505 DART AEROSPACE
NEXT ASSY (S)	DRAWN BY H. ROSANO	
	CHECKED BY D. BARBER	
	DRAWING APPROVAL P. BRAVO 08/05/09	
	CONTRACT NO.	
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS .010 ANGLES 8° ±	PARTS LIST EC145 CABLE CUTTERS KIT SEE CAGE CODE DWG. NO. 647.1300 B 07M26 SCALE NONE SHEET 1 OF 10

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF
DART AEROSPACE. ANY REPRODUCTION IN PART OR WHOLE WITHOUT
THE WRITTEN PERMISSION OF DART AEROSPACE IS PROHIBITED.

REFERENCE ONLY

	4	4		4	4		4	4	51	601.3209	LOCKNUT	MS21042L4	
1	4	5	1	4	5	1	8	9	50	601.2973	LOCKNUT	MS21042-08	
27	19	46	27	19	46	27	18	45	49	601.2943	LOCKNUT	MS21042-3	
	3	3		3	3		3	3	48	601.2375	WASHER		
2	8	10	2	8	10	2	16	18	47	601.2764	WASHER	NAS1149F4832P	
62	42	104	62	42	104	62	40	102	46	601.1607	WASHER	NAS1149F0332P	
1		1	1		1	1		1	45	601.2525	SCREW	MS27039-0807	
4		4	4		4	4		4	44	601.1952	SCREW	MS27039-1-20	
							4	4	43	601.3010	SCREW	MS27039-0810	
	4	4		4	4		4	4	42	601.3224	SCREW	AN525-10R12	
6		6	6		6	6		6	41	601.1365	SCREW	MS27039-1-10	
3		3	3		3	3		3	40	601.2198	SCREW	MS27039-1-07	
	3	3		3	3		3	3	39	601.2999	SCREW		
18		18	18		18	18		18	38	601.2459	SCREW	MS27039C1-06	
	4	4		4	4		4	4	37	601.1622	SCREW	MS27039-1-14	
10		10	10		10	10		10	36	601.2051	SCREW	MS24694C52	
2		2	2		2	2		2	35	601.2823	BOLT	AN3-4A	
1		1	1		1	1		1	34	601.1324	BOLT	AN4CH6A	
	2	2		2	2		2	2	33	601.1874	BOLT	AN3C10A	
	12	12		12	12		16	16	32	601.2826	BOLT	AN3-11A	
	8	8		8	8		8	8	31	601.2638	WASHER	NAS1149F0432P	
	4	4		4	4		4	4	30	601.3002	BOLT	NAS6604-66	
2		2	2		2	2		2	29	647.1811	SPACER		
4		4	4		4	4		4	28	647.2511	NUT		
4		4	4		4	4		4	27	647.2510	SLEEVE		
13		13	13		13	13		13	26	647.1812	SHIM		
4		4	4		4	4		4	25	647.1910	CLIP		
1		1	1		1	1		1	24	647.1810	NOSE DOOR DOUBLER		
1		1	1		1	1		1	23	647.1818	NOSE DOOR SPACER		
2		2	2		2	2		2	22	647.1813	ANGLE		
1		1	1		1	1		1	21	647.1913	TEE		
1		1	1		1	1		1	20	647.1814	GUSSET, LH		
1		1	1		1	1		1	19	647.1815	GUSSET, RH		
1		1	1		1	1		1	18	647.1915	SUPPORT ANGLE		
	2	2		2	2		2	2	17	647.2011	LOWER STRUT		
1		1	1		1	1		1	16	647.1914	BRACKET		
1		1	1		1	1		1	15	647.1816	SUPPORT, LH		
.1309	.1308	.1307	.1306	.1305	.1304	.1303	.1302	.1301	FINO #	PART #	DESCRIPTION	MATL	SPEC.

BOM Table (Restructured)

ORIGINAL DATE 07/04/09	DRAWN BY B. BOLAND	CHECKED BY D. BARBER	DART AEROSPACE 3030 ENTERPRISE CT., SUITE A VISTA, CA. 92081 (760)-724-5300
DRAWING APPROVAL P. BRAVO OLIVERO	CONTRACT NO.		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS .010 ANGLES ± .5°			
SER. CAGE CODE B 07M26 DWG. NO. 647.1300 SCALE NONE			
SHEET 2 OF 10			REV. D